

EER MODULATOR WITH POWER AMPLIFIER HAVING FEEDBACK LOOP
PROVIDING SOFT OUTPUT IMPEDANCE

ABSTRACT

An EER amplifier for amplifying an RF signal includes:

(II) a first RF amplifier for amplifying the phase portion of the signal;

(III) an EER modulator for amplifying the envelope or baseband portion of the signal, including:

A) a high frequency operational amplifier;

B) a power amplifier;

C) a feedback control loop including:

(1) a current-to-voltage conversion amplifier having an input coupled to a current monitoring output of the power amplifier and an output,

(2) an input buffer amplifier having an input coupled to receive the envelope signal and an output;

(3) a summing amplifier having:

(a) an input coupled to the outputs of: (a) the current-to-voltage conversion amplifier and (b) the input buffer amplifier, and

(b) an output coupled to the current control input of the power amplifier.